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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/581,554	06/02/2006	Akihiro Taniguchi	043890-0791	6219

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EXAMINER	
TORRES RUIZ, JOHALI ALEJANDRA	
ART UNIT	PAPER NUMBER
2858	
MAIL DATE	DELIVERY MODE
10/27/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/581,554	TANIGUCHI ET AL.	
	Examiner	Art Unit	
	JOHALI A. TORRES RUIZ	2858	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 July 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06 November 2008* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This office action has been issued in response to the amendment filed on July 21, 2009.

2. Claims 1-11 are pending.

3. Applicant's arguments have been carefully and respectfully considered. Rejections have been maintained where arguments were not persuasive.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-6 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwaizono et al. (U.S. Patent Number 6,714,882), Sato et al. (U.S.

Patent Number 6,008,626) and further in view of Terada et al. (U.S. Patent Number 6,456,041).

6. Claims 1 and 9-10: Iwaizono teaches a power supply system including a lithium-ion secondary battery (10) (Col.4, Lines 33-34); a temperature detection portion (52) for detecting a temperature of the power supply (10) (Col.5, Lines 8-9); a voltage detection portion (48) for detecting a voltage of the power supply (10) (Col.7, Lines 33-36); and a forced discharge portion for recognizing an abnormality of the power supply when the temperature of the power supply detected by the temperature detection portion is not lower than the first temperature (Col.8, Lines 13-15) and the voltage of the power supply detected by the voltage detection portion is not lower than the first voltage (Col.8, Lines 11-13) and for forcedly discharging the power supply until the voltage of the power supply detected by the voltage detection portion reaches the second voltage (Col.8, Lines 16-17); and an equipment circuit fed by the power supply (Col.4, lines 45-47).

Iwaizono does not explicitly teach a notification portion; forcibly discharging the power supply in a state in which a power feed from the power supply to the portable equipment is off, and for electrifying the notification portion by the power supply, thereby making the notification portion continuously notify a message that the abnormality is being avoided while the power supply is being discharged.

Sato teaches a power supply (12) being a lithium battery (Col.2, Lines 45-46), a memory for storing temperature and voltage from the battery (Col.2, Lines 61-67) and forcibly discharging the power supply in a state in which a power feed from the power supply to the portable equipment is off (Col.5, Lines 50-56).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have had the teachings of Sato in the device of Iwaizono to prevent the lithium battery from being deteriorated (Col.6, Lines 45-51).

Terada teaches a power supply system (21) comprising a notification portion (119) being powered by the power supply (102) (Fig.2), continuously notifying a message of refreshment notice, while a power supply (102) is being discharged (Col.5, Lines 4-15 and 50-56) (Col.11, Lines 62-67).

Iwaizono, Sato and Terada are analogous to the power supply art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have had the teachings of Terada in the combination of Iwaizono and Sato to have notified a user of different conditions in the power supply system (Col.5, Lines 50-56).

7. Claim 2: Iwaizono, Sato and Terada teach the limitations of claim 1 as discussed above. Iwaizono teaches a switch (34) coupled to the power supply (10) and a control portion for turning on the switch when the abnormality of the power supply is recognized (Col.8, Lines 7-10), and turning off the switch when the voltage of the power supply detected by the voltage detection portion reaches the second voltage (Col.8, Lines 16-17).

Iwaizono does not explicitly teach the switch is coupled in series with the notification portion.

The rearrangement of parts has been held to support a *prima facie* case of obviousness. In re Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have had located the switch in series with a notification portion given that the location of the switch would not have modified the operation of discharging the battery when an abnormality is recognized.

8. Claim 4: Iwaizono, Sato and Terada teach the limitations of claim 1 as discussed above. Iwaizono teaches a switch (34) coupled to the power supply (10) and a control portion for turning on the switch when the abnormality of the power supply is recognized (Col.8, Lines 7-10); the switch involved in the power feed from the power supply to the portable equipment, when an abnormality is detected the switch is activated and a power feed between the power supply and a portable equipment is interrupted.

9. Claims 3 and 6: Iwaizono, Sato and Terada teach the limitations of claims 2 and 4 as discussed above.

Terada teaches a memory portion (106) store data indicating a forced discharge is completed (Col.4, Lines 63-67) (Col.5, Lines 1-3), and making the notification portion notify a message notifying that the refreshment being over, when the power feed from the power supply to the portable equipment is on, based on the data that the forced discharge is completed (Col.5, Lines 50-56).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have had the teachings of Terada in the combination of Iwaizono, Sato and Terada to have notified a user of different conditions in the power supply system (Col.5, Lines 50-56).

10. Claim 5: Iwaizono, Sato and Terada teach the limitations of claim 4 as discussed above. Iwaizono teaches the control portion turns off the switch when the voltage of the power supply detected by the voltage detection portion reaches the second voltage (Col.8, Lines 16-17).

11. Claim 11: Iwaizono, Sato and Terada teach the limitations of claim 10 as discussed above. They do not explicitly teach at least one of the voltage detection portion, the memory portion and the forced discharge portion I integrated with the equipment circuit.

The rearrangement of parts has been held to support a *prima facie* case of obviousness. In re Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have had changed the location of the voltage detection circuit, memory or forced discharge portion in Iwaizono to the equipment circuit given that it would not have modified the operation of detecting the voltage of the battery, saving battery parameters or discharging the battery when the abnormality is recognized.

12. Claims 7- 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwaizono et al. (U.S. Patent Number 6,714,882), Sato et al. (U.S. Patent Number 6,008,626) and Terada et al. (U.S. Patent Number 6,456,041) as applied to claim 1 above, and further in view of Yoshida et al. (U.S. Publication Number 2005/0106455).

13. Claim 7: Iwaizono, Sato and Terada teach the limitations of claim 1 as discussed above. They do not explicitly teach an active material of a positive electrode of the lithium-ion secondary battery comprises nickel complex oxide.

Yoshida teaches an active material of a positive electrode of a lithium-ion secondary battery comprises nickel complex oxide (par.3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have had the teachings of Yoshida in the combination of Iwaizono, Sato and Terada because it is known in the art as an acceptable material for the positive electrode of a lithium ion battery.

14. Claim 8: Iwaizono, Sato, Terada and Yoshida teach the limitations of claim 7 as discussed above. Iwaizono teaches the second voltage is not lower than 3.85V and not higher than 3.95V for each lithium-ion secondary battery (Col.8, Lines 16-17).

Iwaizono teaches forcibly discharging when the temperature is equal to or greater than 35°C and the voltage is equal or greater than 4V (Col.8, Lines 11-14).

In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists. MPEP 2131.03

A temperature greater than 35°C allows for a temperature between 55°C and 65°C; and voltage greater than 4V allows for a voltage between 4.05V and 4.15V.

Response to Arguments

15. Applicant's arguments filed 7/21/2009 have been fully considered but they are not persuasive.

16. In response to applicant's argument that the refreshment discharge in Terada is not performed to avoid an abnormality in a battery as found in the present subject matter and therefore the message displayed does not indicate that the abnormality is being avoided.

Iwaizono teaches a forced discharge portion for recognizing **an abnormality of the power supply when the temperature of the power supply detected by the temperature detection portion is not lower than the first temperature (Col.8, Lines 13-15) and the voltage of the power supply detected by the voltage detection portion is not lower than the first voltage (Col.8, Lines 11-13)** and for forcedly discharging the power supply to avoid the abnormality.

Iwaizono does not explicitly teach a notification portion to notify a message that the abnormality is being avoided.

Terada was used to show a notification portion that notifies a message of forcibly battery discharge.

Therefore given that Iwaizono teaches forcibly discharging a battery is a known way of avoiding abnormality in a battery, it would have been obvious to one of ordinary skill in the art to have had the notification portion of Terada in the combination of Iwaizono and Sato with the expected result of notifying a user when an abnormality is being avoided.

Conclusion

17. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHALI A. TORRES RUIZ whose telephone number is (571)270-1262. The examiner can normally be reached on M- F 9:30am-6pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Assouad can be reached on (571) 272-2210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Edward Tso/
Primary Examiner, Art Unit 2858

/J. A. T./
Examiner, Art Unit 2858